

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Official Action dated 30 November 2006. Responsive to the rejections made in the Official Action, Claims 1, 4, 6, 13, 18, 21 and 22 have been amended to clarify the combination of elements which form the invention of the subject Patent Application and/or correct the language thereof. Claims 3, 7-12 and 19-20 are cancelled.

In the Official Action, the Examiner required a Substitute Specification in proper idiomatic English in order to correct the numerous grammatical, idiomatic and translational errors found therein.

Accordingly, a Substitute Specification and Abstract have been provided that are believed to overcome the Examiner's objections thereto. A clean copy of the Substitute Specification and Abstract are attached to this Amendment in compliance with 37 C.F.R. § 1.125. The Substitute Specification includes the same changes as are indicated in the marked-up copy of the original Specification and Abstract. It is believed that the subject matter disclosed by the Substitute Specification was previously disclosed in the Specification and Claims, as filed, and the accompanying Drawing Figures. No new matter has been added by these changes.

In the Official Action, the Examiner rejected Claims 1-6 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

The Examiner stated that the Claims contain subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the relevant art that the Inventors, at the time the Application was filed, had possession of the claimed invention. The Examiner further stated that he was unable to find support for the limitation of the two gelless electrodes extending “through” the edge of the shell. The Examiner kindly noted that the electrodes did pass over an edge of the shell.

Claim 1 has been amended to now more accurately describe the electrodes as - - passing over one edge of the shell to the bottom surface of the shell - -, which replaces the language of “extending through the edge”. Therefore, it is now believed that the Claims are fully supported by the Specification and are sufficient to allow one skilled in the relevant art to make and/or use the invention.

In the Official Action, the Examiner rejected Claims 1-6 and 21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Here again, the Examiner was objecting to the language describing the electrodes as extending through the edge of the shell. The Examiner further objected to the claim of the “cover”, as it lacked any structural relationship to other elements of the claimed invention. It is respectfully submitted that the objection to the “passing through” language has been overcome and discussed above, and Claim 21 has now been amended to reflect the structural relationships,

shown in Fig. 9, between the cover, shell and operating panel, thereby overcoming the rejection based on the cover.

In the Official Action, the Examiner rejected Claims 1-6 under 35 U.S.C. § 103(a), as being unpatentable over Mault, et al., U.S. Patent 6,790,178, in view of Au, et al., U.S. Published Patent Application 2002/0095093. The Examiner rejected Claims 13, 14, 21 and 22 under 35 U.S.C. § 102(e), as being anticipated by Mault, et al., or in the alternative, under 35 U.S.C. § 103(a), as being obvious over Mault, et al. in view of Au, et al. Claims 15-18 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Mault, et al. in view of Au, et al.

Before discussing the prior art relied upon by the Examiner, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. The invention of the subject Patent Application is directed to a device for measuring an electrocardiogram with a tapeless format. The device includes a shell having opposing top and bottom surfaces. The shell is shaped as a thin and long cube and has at least one operating panel on the top surface. The device includes two gelless electrodes for detecting electrocardiogram signals. Each of the gelless electrodes has a thin foil shape slightly embedded and fixed in the operating panel in laterally spaced relationship. Each of the two gelless electrodes extends along the upper surface and passes over the edge of the shell to the bottom surface of the shell opposite to the operating panel. Each of the gelless electrodes has protruding surface portions disposed on

the upper surface and the bottom surface adjacent the one edge to form gripping surfaces for grasping by a root area between a user's fingers. The device includes at least one information display located on the operating panel to display a plurality of measured values. Still further, the device includes a calculation system disposed in the shell and connected to the two gelless electrodes and the information display for calculating electrical information sensed by the gelless electrodes and displaying results on the information display.

From another aspect, as defined in Claim 13, the invention of the subject Patent Application is directed to a device for measuring an electrocardiogram with a tapeless format. The device includes a shell having opposing top and bottom surfaces. The shell is shaped as a thin and long cube and has at least one operating panel on the top surface. The shell includes two first gelless electrodes slightly embedded and respectively fixed in the top surface of the shell and laterally spaced one from the other for detecting electrocardiogram signals. One first gelless electrode of the two first gelless electrodes is disposed on opposing sides of the operating panel. This includes at least one information display located on the operating panel to display measured values. Still further, the device includes a calculation system disposed in the shell and connected to the two pairs of gelless electrodes and the information display for calculating electrical information sensed by the gelless electrodes and displaying results on the information display.

From yet another aspect, as defined in Claim 22, the invention of the subject Patent Application is directed to a device for measuring an electrocardiogram with a tapeless format. The device includes all of the elements defined in the preceeding paragraph (Claim 13) and further adds two second gelless electrodes respectively fixed in the bottom surface of the shell and laterally spaced one from the other for detecting electrocardiogram signals. Therefore, in this embodiment of the device defined by the claim 22, there are two pairs of gelless electrodes respectively fixed in the top and bottom surfaces of the shell and laterally spaced one from the other for detecting electrocardiogram signals. One gelless electrode of each of the pairs of gelless electrodes being disposed on opposing sides of the operating panel.

In contradistinction, the Mault, et al. reference is directed to a physiological monitor and associated computation, display and communication unit. The reference discloses various modules that are adapted to connect to a personal digital assistant (PDA) which is programmed to calculate and display results based on the sensor information provided thereto from the various modules which are individually connectable to the PDA. Contrary to the Examiner's assertion, the device discloses an EKG/heart sound module, shown in Fig. 11 which includes three electrodes 114 disposed in spaced relationship on one side of a housing 112. The device is intended to be placed on the chest of a patient in order to obtain the electrocardiogram signals, and simultaneously pick up heart sounds utilizing the

microphone 116 disposed on the same face of the housing. As shown in Figs. 11 and 12, the housing 112 is coupled to the PDA 120, and extends along the rear side of the PDA, allowing the display 124 to be visualized while the electrodes 114 of the housing 112 are disposed on the chest of the patient.

The Examiner has referred to the body fat measurement module shown in Figs. 13 and 14 for teaching of electrodes which extend over the edge of a shell. The electrodes 144, 146, 148, and 150 are mounted on electrode supports 152 and 154, but are disclosed as being utilized for a bioimpedance measurement, and not the receipt of electrocardiogram signals. The bioimpedance measurement requires one pair of electrodes to output a constant current that passes through the user and is respectively received by the other two electrodes. Thus, Mault, et al. cannot “inherently” provide an EKG monitor with the contact configuration shown in Figs. 13 and 14, as the reference clearly teaches away from the use of that electrode configuration for EKG measurements. The reference clearly distinguishes the electrode configuration for EKG measurements from that of body fat measurements. For EKG measurements, all of the electrodes are passive, receiving electrical signals from the patient’s body, rather than outputting any signals thereto. Thus, the reference fails to disclose or suggest two gelless electrodes for detecting electrocardiogram signals, each of the gelless electrodes having a thin foil shape slightly embedded and fixed in the operating panel in laterally spaced relationship, each of the two gelless electrodes extending along

the upper surface and passing over one edge of the shell to the bottom surface of the shell opposite to the operating panel, each of the gelless electrodes having protruding surface portions disposed on the upper surface and the bottom surface adjacent the one edge to form gripping surfaces for grasping by a root area between a user's fingers, as now defined in Claim 1.

In the invention of the subject Patent Application as shown in Figs. 2 and 3, protruding portions 151 and 171 are provided on both the upper and lower surfaces, adjacent the edge over which the electrode passes, providing an area which can be easily gripped by the user as the user's fingers contact the respective electrode. That arrangement allows the user to both tightly grip the electrodes to provide a good electrical connection and support for the device itself, so that it is easily held while the measurement is being made.

With respect to Claim 13, the reference fails to disclose two gelless electrodes slightly embedded and respectively fixed in the top surface of the shell and laterally spaced one from the other for detecting electrocardiogram signals, one first gelless electrode of the two first gelless electrodes being disposed on opposing sides of the operating panel. Further, with respect to Claim 22, the reference fails to disclose two pairs of gelless electrodes respectively fixed in the top and bottom surfaces of the shell and laterally spaced one from the other detecting electrocardiogram signals, one gelless electrode of each of the pairs of gelless electrodes being disposed on opposing sides of the operating panel.

Neither the EKG module combined with the PDA nor the body fat measurement module combined with the PDA can be interpreted as disclosing or suggesting such a structure.

Therefore, as the Mault, et al. reference fails to disclose each and every one of the elements of the invention of the subject Patent Application as now claimed, it cannot anticipate that invention. Further, as the reference fails to suggest such a combination of elements, and in fact teaches away from that combination, it cannot make obvious that invention either.

The Au, et al. reference does not overcome the deficiencies of Mault, et al. The Au, et al. reference is directed to a hand-held surface ECG and RF apparatus incorporated with a medical device. The device includes one or more grasp structures 10 which have an ovoid bulbous shape and oblong shaped electrodes 12. The structures 10 are intended to be grasped by a user's hand for contact with one or more of the electrodes 12 for their receipt of electrocardiogram signals. The device includes a telemetry unit 4 which transmits the received electrocardiogram signals to a remote programmer 16. Thus, the electrodes are not disposed in any relationship to an operating panel. Nor does the reference disclose or suggest electrodes that have any protruding surface portions which improve the grasp of the user, as provided in the invention of the subject Patent Application.

Thus, as neither Mault, et al. nor Au, et al. disclose or suggest the concatenation of elements which form the invention of the subject Patent

Application, as now claimed, they cannot, in combination, make obvious that invention. For all of the foregoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

If there are any further charges associated with this filing, the Honorable Commissioner for Patents is hereby authorized to charge Deposit Account #18-2011 for such charges.

Respectfully submitted,
For: ROSENBERG, KLEIN & LEE

A handwritten signature in black ink, appearing to read "David I. Klein". The signature is fluid and cursive, with the first name "David" and last name "Klein" clearly distinguishable.

David I. Klein
Registration #33,253

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Suite 101
3458 Ellicott Center Drive
Ellicott City, MD 21043
(410) 465-6678
Customer No. 04586